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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,508	10/30/2003	Shirou Nakano	K06-163681M/AT NGB.326	5775
21254	7590	08/11/2005	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			LOUIS JACQUES, JACQUES H	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,508

Applicant(s)

NAKANO ET AL.

Examiner

Jacques H. Louis-Jacques

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 and 13-19 is/are rejected.
- 7) ☒ Claim(s) 6 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03092004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan. It is noted, however, that applicant has not filed a certified copy of none of foreign priority documents/applications as required by 35 U.S.C. 119(b).

Claim Objections

2. Claim 13 is objected to because of the following informalities: In line 1, "is which" should be changed to --in which--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13, 14, 15 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 13 (line 6) and claim 16 (lines 8, 10), "the physical amount" lacks clear antecedent basis.

In claim 15, although Applicant can be his/her own lexicographer, the "second determining unit" and the "predetermined second reference" are improper since they apply that there are a "first determining unit" and a "predetermined first reference". Claim 15 depends on claim 13, which does not recite a "first

Art Unit: 3661

determining unit”, not a “predetermined first reference”. Claim 15 should be amended either to depend on claim 14 in order to provide proper antecedent basis. Claim 14 depends on claim 11. It appears that claim 14 should depend on claim 13.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, 7-11, 13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sano et al [5,116,254].

Sano et al discloses a steering apparatus for vehicles comprising a steering mechanism (2, 3) for turning a steerable tire-wheel, a steering actuator (8) for providing a steering force to the steering mechanism (2, 3), a load detecting unit (26, 27, 28, 29) for detecting a tire load, which is a load applied to a tire of a vehicle (100), and a steering control unit (12) for controlling the steering actuator according to the tire load detected by the load detecting unit. See figures 1, 8, and 11-12.

Sano et al also discloses that the load detecting unit comprises an air pressure detecting unit (16, 17, 18, 19) for detecting the air pressure of the tire. See figures 8, 9, and 10.

In addition, Sano et al discloses that the load detecting unit comprises a stress detecting unit for detecting a stress applied to the tire and that the stress detecting unit preferably includes a left side stress detecting unit and a right side stress detecting unit for detecting stresses applied to the left side and the right side of the tire respectively when viewed toward the direction of travel of the vehicle. See figures 4-7 and 13-18 and column 2.

Furthermore, Sano et al discloses a steering direction detecting unit for detecting the steering direction of the vehicle, wherein the steering control unit controls the steering actuator based on the steering direction of the vehicle detected by the steering direction detecting unit and the stresses detected by the left side stress detecting unit and the right side stress detecting unit, respectively. See columns 7, 8, and 10.

According also to Sano et al, the vehicle steering apparatus comprises a reaction force actuator for providing an operation reaction force to the operating member (figure 1 and column 4), a load detecting unit for detecting the tire load which is applied to the tire of the vehicle (figure 12), and a reaction force control unit for controlling the reaction force actuator according to the tire load detected by the load detecting unit (figures 11, 12 and columns 14-15).

Sano et al further discloses an actuator for applying a force to the operating member for transmitting information to the driver, at least one sensor for detecting the physical amount relating to the movement of the vehicle and outputting the detection signal according to the detected result, a signal analyzing unit for analyzing the detected signal output by the sensor and supplying an

Art Unit: 3661

analytical solution, and a control unit for controlling the actuator based on the analytical solution supplied from the signal analyzing unit. See figures 1-2, 5, 8-9 and 11-12.

Allowable Subject Matter

7. Claims 6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 14 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. Claim 16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The prior art do not particularly disclose that the reaction force control unit controls the reaction force actuator based on the steering direction of the vehicle detected by the steering direction detecting unit and the stresses applied on the outer portions of the tire when viewed in the direction of travel detected by the left side stress detecting unit and the right side stress detecting unit. The prior art also fail to particularly disclose a first determining unit for determining whether or not the analytical solution analyzed by the signal analyzing unit conforms a predetermined first reference condition, and a teaching unit for providing, when the analytic solution of the signal analyzing unit conforms the first reference condition, a teaching corresponding to the result of determination to the driver;

Art Unit: 3661

and a second determining unit for determining whether or not the analytical solution analyzed by the signal analyzing unit conforms a predetermined second reference condition, wherein when the analytic solution of the signal analyzing unit is determined to conform the second reference condition by the second determining unit, the control unit controls the actuator according to the analytic solution.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4,901,811	Uno et al	Feb. 1990
4,964,481	Sano et al	Oct. 1990
6,397,127	Meyers et al	May 2002
6,415,215	Nishizaki et al	Jul. 2002
6,802,226	Ono et al	Oct. 2004
US 20040133324	Yasui et al	Jul. 2004

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques H. Louis-Jacques whose telephone number is 571-272-6962. The examiner can normally be reached on M-Th 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jacques H Louis-Jacques
Primary Examiner
Art Unit 3661

/jlj

Jacques H Louis-Jacques
JACQUES
PRIMARY EXAMINER